MedPAC's Policy Goal for Productivity

Medicare's payment systems should encourage efficiency: providers should be able to reduce the quantity of inputs required to produce a unit of service while maintaining quality. Within its framework for recommending updates to Medicare payment rates, MedPAC includes a target for productivity as a mechanism to encourage efficiency. Economic literature on the hospital industry, for example, suggests that providers who are under fiscal pressure generally have managed to slow their cost growth more than those facing less fiscal pressure.1 MedPAC's productivity target is based on the Bureau of Labor Statistics' estimate of the 10-year moving average rate of past growth in total factor productivity for the economy as a whole, which currently equals 0.9 percent.

Medicare payment rates to health care providers should be set so that the federal government benefits from providers' productivity gains, just as private purchasers of goods in competitive markets benefit from the productivity gains of their suppliers. In developing its payment recommendations, MedPAC expects improvements in productivity consistent with the productivity gains achieved by the firms and workers who pay the taxes and premiums that support Medicare. When included in our update recommendation, the productivity factor is a policy objective, not an empirical estimate. However, to the extent that efficient providers are unable to achieve this productivity target, that outcome would be revealed subsequently in MedPAC's analysis of payment adequacy, which is considered anew each year.

Together with the productivity target, MedPAC's update framework also considers cost-increasing advances in science and technology that improve the quality of care. Under a prospective payment system, providers already have an incentive to adopt technological changes that reduce the costs of caring for patients. Other technological changes increase the cost of care and, by design, payment systems for some providers already take this into account. But to account for cost-increasing innovations that improve quality and may not be reflected in Medicare's payment systems, MedPAC has recommended increasing payment rates through an allowance for "scientific and technological advances."

The American Hospital Association (AHA) has questioned whether a national average rate of productivity growth is a reasonable approximation for hospitals. In research sponsored by the AHA, Lichtenberg (2003) argues that productivity growth for the hospital industry is far lower than that for the economy as a whole and suggests that MedPAC use a hospital-specific measure of productivity growth. His suggestion reflects a lack of understanding about MedPAC's productivity target, which is not meant to be an empirical estimate for any specific group of providers. In addition, his estimates suffer from common methodological shortcomings—problems that make the approach of using hospital-specific growth rates largely impractical. But the AHA goes further by citing Lichtenberg's work as the reason to exclude the productivity target entirely in MedPAC's recommendations for hospital updates (AHA 2004). That argument is unreasonable because it presumes that there will be no productivity improvement in the hospital industry. In the discussion that follows, we explain the shortcomings in Lichtenberg's approach in greater detail.

Problems in measuring growth of hospital-specific productivity

Lichtenberg's estimates of productivity growth show trends that are difficult to square with what was happening in the hospital industry at the time. Over the 1987-2001 period, he estimates that growth in hospital labor productivity was lower than that for economy-wide labor productivity in each year except 2001. Lichtenberg's analysis shows high hospital productivity growth in 2001 (a year of significant cost growth), but does not find significant productivity growth in the early 1990s even though patients' lengths of stay (and hospitals' reported costs) were falling rapidly.

He estimates productivity growth by deflating the value of hospital output by a price index, and then dividing by employment levels. A common problem with this approach involves using price deflators that do not capture changes in quality. Lichtenberg never acknowledges this issue, even though failing to capture quality improvements can significantly overstate price growth and thereby understate productivity growth (Newhouse, 2001). Currently, the Bureau of Labor Statistics rarely estimates the value of quality improvements when it builds prices indexes—computers and automobiles are exceptions. But the pace of medical innovation has been rapid and very important to the public's health. Improvements in the quality of hospital services have helped to extend patients' lives, raised their quality of life, and reduced medical errors. For those reasons, it is not clear that productivity growth in the hospital industry is, in fact, lower than that for the economy as a whole as Lichtenberg asserts.

Moreover, estimates of productivity growth for health care industries are strongly affected by the role of administered prices—particularly through Medicare and Medicaid. As a result, year to year variation in health care spending may not measure changes in the value of real resources as well as in industries that are more purely competitive. By basing its policy goal on productivity growth in the entire economy, MedPAC avoids what would otherwise be a problem with circularity: using hospital revenues that are heavily influenced by Medicare's payment rates to measure productivity growth that, in turn, is used to update Medicare's payment rates.

Lichtenberg's paper centers around the notion that labor-intensive industries have lower productivity growth, and that hospitals are a labor-intensive industry. He states that labor costs are a much higher share of output of the health services sector (a broader combination of industries than hospitals alone) than in the general economy. But Lichtenberg's estimate of labor intensity is higher than estimates for the hospital industry by the Centers for Medicare and Medicaid Services (Federal Register, August 2002) and the number that Congress now allows hospitals to use in Medicare payment rates (Medicare Prescription Drug, Improvement, and Modernization Act of 2003). Those alternative estimates would put the hospital industry closer to average labor intensity than Lichtenberg's analysis suggests.[2]

Even if hospitals are more labor-intensive, the nature of the workers they hire may embody relatively more "human capital," which produces greater productivity gains than in other industries. Health care industries are accumulating human capital in the form of technical expertise and improved protocols. For example, if surgery techniques improve and patients recover from surgeries more rapidly, we will see shorter hospital stays that may use fewer resources per hospital discharge.

Finally, Lichtenberg also argues that hospitals tend to be far less intensive in research and development (R&D) than other industries, and that industries with lower R&D intensity tend to have smaller productivity gains. Yet he ignores the context in which investments for R&D take place within health care industries. Most of the research that affects hospitals is paid for by other parties: medical schools, the federal government (through the National Institutes of Health), pharmaceutical companies, and medical device manufacturers. Additionally, some of the R&D that one should consider for the hospital sector may be purchased as intermediate goods (such as high-resolution imaging equipment) rather than produced by the hospital itself.

Endnotes

1. Gaskin and Hadley (1997) found that increasing HMO penetration and declining Medicare prospective payment rates restrained hospital cost growth in the late 1980s and early 1990s.

2. There are other methodological issues with his analysis as well. For example, Lichtenberg groups more than 450 industries into quartiles based on their degree of labor intensity. He then calculates simple mean values of labor intensity and growth in multifactor productivity by quartile to demonstrate that higher levels of labor intensity are associated with lower productivity growth. However, he does not show the variation in productivity growth within each of the four groups, which is likely to be considerable. Even granting that there is, on average, a systematic relationship between productivity and labor intensity, it does not follow that any specific industry has the average productivity growth of its quartile.

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Staff Contact

Rachel Schmidt
(202) 220-3700

February 9, 2004